WHAT IS CLAIMED IS:

1. A molecular sieve belonging to the ZSM-48 family of zeolites, wherein the molecular sieve comprises:

a silicon oxide to aluminum oxide mole ratio of 40 to 200,

at least 70% polytype 6 of the total ZSM-48-type material present in the product, and

an additional EUO-type molecular sieve phase in an amount of between 0 and 3.5 percent by weight of the total product; and

wherein the molecular sieve has a morphology characterized as polycrystalline aggregates comprising crystallites collectively having an average aspect ratio of between 1 and 8.

2. A molecular sieve according to Claim 1, wherein the molecular sieve has, in its as-synthesized form, an X-ray diffraction pattern substantially as shown in the following Table:

2-Theta	d-spacing (nm)	Relative Intensity[(b)]
7.55 ± 0.20	1.170	W
8.71 ± 0.20	1.015	W
12.49 ± 0.20	0.708	W
15.12 ± 0.20	0.586	W
21.18 ± 0.20	0.419	VS
22.82 ± 0.20	0.390	VS
24.62 ± 0.20	0.361	W

[(b)] W = weak (> 0 to ≤ 20); M = medium (> 20 to ≤ 40); S = strong (> 40 to ≤ 60); VS = very strong (> 60 to ≤ 100).

3. The molecular sieve of Claims 1 or 2, wherein the molecular sieve has a silicon oxide to aluminum oxide mole ratio of 70 to 160.

4. The molecular sieve of any of Claims 1-3, wherein the molecular sieve has a silicon oxide to aluminum oxide mole ratio of 80 to 140.

5. The molecular sieve of any of Claims 1-4, wherein the molecular sieve comprises at least 80% polytype 6 of the total ZSM-48-type material present in the product.

6. The molecular sieve of any of Claims 1-5, wherein the molecular sieve comprises between 0.1 and 2 wt.% EU-1.

7. The molecular sieve of any of Claims 1-6, wherein the crystallites collectively have an average aspect ratio of between 1 and 5.

8. The molecular sieve of any of Claims 1-7, wherein the molecular sieve comprises at least 90% polytype 6 of the total ZSM-48-type material present in the product.

9. The molecular sieve of any of Claims 1-8, wherein the crystallites collectively have an average aspect ratio of between 1 and 3.

10. A process for converting hydrocarbons, comprising contacting a hydrocarbonaceous feed under hydrocarbon converting conditions with a catalyst comprising a molecular sieve according to any of Claims 1-9.

11. Use of a molecular sieve according to any of Claims 1-9, for the conversion of hydrocarbons under hydrocarbon converting conditions.